

SEQUENCE LISTING



(1) GENERAL INFORMATION:

- (i) APPLICANT: Saiko HOSOKAWA  
Toshiaki TAGAWA  
Yoko HIRAKAWA  
Norihiko ITO  
Kazuhiro NAGAIKE
- (ii) TITLE OF INVENTION: Human Monoclonal Antibody  
Specifically Binding to Surface Antigen of Cancer  
Cell Membrane
- (iii) NUMBER OF SEQUENCES: 42
- (iv) CORRESPONDENCE ADDRESS:
  - (A) ADDRESSEE: Wenderoth, Lind & Ponack
  - (B) STREET: 2033 K Street, N.W., #800
  - (C) CITY: Washington
  - (D) STATE: D.C.
  - (E) COUNTRY: U.S.A.
  - (F) ZIP: 20006
- (v) COMPUTER READABLE FORM:
  - (A) MEDIUM TYPE: Diskette, 3.5 inch, 1.44 mb
  - (B) COMPUTER: IBM Compatible
  - (C) OPERATING SYSTEM: MS-DOS
  - (D) SOFTWARE: WordPerfect 5.1
- (vi) CURRENT APPLICATION DATA:
  - (A) APPLICATION NUMBER: 09/467,903
  - (B) FILING DATE: December 21, 1999
  - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
  - (A) APPLICATION NUMBER: 08/450,363
  - (B) FILING DATE: May 25, 1995
- (vii) PRIOR APPLICATION DATA:
  - (A) APPLICATION NUMBER: 08/360,125
  - (B) FILING DATE: December 20, 1994
- (vii) PRIOR APPLICATION DATA:
  - (A) APPLICATION NUMBER: 07/905,534

- (B) FILING DATE: June 29, 1992
- (viii) ATTORNEY/AGENT INFORMATION:
  - (A) NAME: Lee Cheng
  - (B) REGISTRATION NUMBER: 40,949
  - (C) REFERENCE/DOCKET NUMBER:
- (ix) TELECOMMUNICATION INFORMATION:
  - (A) TELEPHONE: 202-721-8200
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  - (C) TELEX:
- (2) INFORMATION FOR SEQ ID NO:1:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 37 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE: human IgG antibody
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE:
    - (H) CELL LINE:
    - (I) ORGANELLE:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:

- (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

G GCC CTT GGT GGA GGC TGA AGA GAC GGT GAC CAT TCT

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- (2) INFORMATION FOR SEQ ID NO:2:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 21 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE: human IgG antibody
    - (A) ORGANISM:
    - (B) STRAIN:

- (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE:
  - (H) CELL LINE:
  - (I) ORGANELLE:
  - (vii) IMMEDIATE SOURCE:
    - (A) LIBRARY:
    - (B) CLONE:
  - (viii) POSITION IN GENOME:
    - (A) CHROMOSOME/SEGMENT:
    - (B) MAP POSITION:
    - (C) UNITS:
  - (ix) FEATURE:
    - (A) NAME/KEY:
    - (B) LOCATION:
    - (C) IDENTIFICATION METHOD:
    - (D) OTHER INFORMATION:
  - (x) PUBLICATION INFORMATION:
    - (A) AUTHORS:
    - (B) TITLE:
    - (C) JOURNAL:
    - (D) VOLUME:
    - (E) ISSUE:
    - (F) PAGES:
    - (G) DATE:
    - (H) DOCUMENT NUMBER:
    - (I) FILING DATE:
    - (J) PUBLICATION DATE:
    - (K) RELEVANT RESIDUES:
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:  
TGG TGC AGC CAC AGT TCG TTT 21
- (2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 357 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:

- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG AAG CCT TCA	45
CAG ACC CTG TCC CTC ACC TGC ACT GTC TCT GGT GGC TCC ATC AGC	90
AGT TGT GGT TTC TAC TGG AAC TGG ATC CGC CAG CAC CCA GGG AAG	135
GGC CTG GAG TGG ATT GGG TAC ATC TAT TAC AGT GGG AGC ACC TAC	180
TAC AAC CCG TCC CTC AAG AGT CGA GTT ACC ATA TCG CTA GAC ACG	225
TCT AAG AGC CAG TTC TCC CTG AAG CTG AGC TCT CTG ACT GCC GCG	270
GAC ACG GCC GTG TAT TAC TGT GCG AGG TCT ACC CGA CTA CGG GGG	315
GCT GAC TAC TGG GGC CAG GGA ACA ATG GTC ACC GTC TCT TCA	357

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 342 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:

- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

GAC ATC GTG ATG ACC CAG TCT CCA GAC TCC CTG GCT GTG TCT CTG	45
GGC GAG AGG GCC ACC ATC AAC TGC AAG TCC AGC CAG AGT GTT TTA	90
TAC AAC TCC AAC AAT AAG AAA TAC TTA GCT TGG TAC CAG CAG AAA	135
CCA GGA CAG CCT CCT AAG CTG CTC ATT TAC TGG GCA TCT ACC CGG	180

GAA TCC GGG GTC CCT GAC CGA TTC AGT GGC AGC GGG TCT GGG ACA	225
GAT TTC ACT CTC ACC ATC AGC AGC CTG CAG GCT GAA GAT GTG GCA	270
GTT TAT TAC TGT CAG CAG TAT TAT AGT ACT CCG TGG ACG TTC GGC	315
CAA GGG ACC AAG GTG GAA ATC AAA CGA	342

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 119 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:



- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Gln	Val	Gln	Leu	Gln	Glu	Ser	Gly	Pro	Gly	Leu	Val	Lys	Pro	Ser
1				5					10					15
Gln	Thr	Leu	Ser	Leu	Thr	Cys	Thr	Val	Ser	Gly	Gly	Ser	Ile	Ser
				20					25					30
Ser	Cys	Gly	Phe	Tyr	Trp	Asn	Trp	Ile	Arg	Gln	His	Pro	Gly	Lys
				35					40					45
Gly	Leu	Glu	Trp	Ile	Gly	Tyr	Ile	Tyr	Tyr	Ser	Gly	Ser	Thr	Tyr
				50					55					60
Tyr	Asn	Pro	Ser	Leu	Lys	Ser	Arg	Val	Thr	Ile	Ser	Leu	Asp	Thr
				65					70					75
Ser	Lys	Ser	Gln	Phe	Ser	Leu	Lys	Leu	Ser	Ser	Leu	Thr	Ala	Ala
				80					85					90
Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Ser	Thr	Arg	Leu	Arg	Gly
				95					100					105
Ala	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Met	Val	Thr	Val	Ser	Ser	
				110					115					

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 114 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:

- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu
1				5				10						15
Gly	Glu	Arg	Ala	Thr	Ile	Asn	Cys	Lys	Ser	Ser	Gln	Ser	Val	Leu
				20				25						30
Tyr	Asn	Ser	Asn	Asn	Lys	Lys	Tyr	Leu	Ala	Trp	Tyr	Gln	Gln	Lys
				35				40						45
Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr	Trp	Ala	Ser	Thr	Arg
				50				55						60
Glu	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr
				65				70						75
Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala
				80				85						90
Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Tyr	Ser	Thr	Pro	Trp	Thr	Phe	Gly
				95				100						105
Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg						
				110										

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 17 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:

- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE: human IgM antibody
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE:
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:  
C GAG GGG GAA AAG GGT T 17

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 19 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL: .
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE: human IgM antibody
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE:
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

G AAG CTC CTC AGA GGA GGG

19

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 366 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:

- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CAG	CTG	CAG	CTG	CAG	GAG	TCG	GGC	CCA	GGA	CTG	GTG	AAG	CCT	TCG	45
GAG	ACC	CTG	TCC	CTC	ACC	TGC	ACT	GTC	TCT	GGT	GGC	TCC	ATC	AGC	90
AGT	AGT	AGT	TAC	TAC	TGG	GGC	TGG	ATC	CGC	CAG	CCC	CCA	GGG	AAG	135
GGG	CTG	GAG	TGG	ATT	GGG	AGT	ATC	TAT	TAT	AGT	GGG	AGC	ACC	TAC	180
TAC	AAC	CCG	TCC	CTC	AAG	AGT	CGA	GTC	ACC	ATA	TCC	GTA	GAC	ACG	225
TCC	AAG	AAC	CAG	TTC	TCC	CTG	AAG	CTG	AGC	TCT	GTG	ACC	GCC	GCA	270
GAC	ACG	GCT	GTG	TAT	TAC	TGT	GCG	AGG	GGG	AGC	TAC	GGG	GGC	TAC	315
TAC	TAC	GGT	ATG	GAC	GTC	TGG	GGC	CAA	GGG	ACC	ACG	GTC	ACC	GTC	360

TCC TCA

366

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 324 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:



- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TAT GAG CTG ACA CAG CCA CCC TCG GTG TCA GTG TCC CCA GGA CAG	45
ACG GCC AGG ATC ACC TGC TCT GGA GAT GCA TTG CCA AAG CAA TAT	90
GCT TAT TGG TAC CAG CAG AAG CCA GGC CAG GCC CCT GTG CTG GTG	135
ATA TAT AAA GAC AGT GAG AGG CCC TCA GGG ATC CCT GAG CGA TTC	180
TCT GGC TCC AGC TCA GGG ACA ACA GTC ACG TTG ACC ATC AGT GGA	225
GTC CAG GCA GAA GAC GAG GCT GAC TAT TAC TGT CAA TCA GCA GAC	270
AGC AGT GGT ACT TAT GAG GTA TTC GGC GGA GGG ACC AAG CTG ACC	315
GTC CTA GGT	324

(2) INFORMATION FOR SEQ ID NO:11:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 122 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:

- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Gln Leu Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser  
1 5 10 15

Glu Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Gly Ser Ile Ser		
	20	25 30
Ser Ser Ser Tyr Tyr Trp Gly Trp Ile Arg Gln Pro Pro Gly Lys		
	35	40 45
Gly Leu Glu Trp Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr		
	50	55 60
Tyr Asn Pro Ser Leu Lys Ser Arg Val Thr Ile Ser Val Asp Thr		
	65	70 75
Ser Lys Asn Gln Phe Ser Leu Lys Leu Ser Ser Val Thr Ala Ala		
	80	85 90
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Ser Tyr Gly Gly Tyr		
	95	100 105
Tyr Tyr Gly Met Asp Val Trp Gly Gln Gly Thr Thr Val Thr Val		
	110	115 120
Ser Ser		

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1

- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Tyr	Glu	Leu	Thr	Gln	Pro	Pro	Ser	Val	Ser	Val	Ser	Pro	Gly	Gln
1				5					10					15
Thr	Ala	Arg	Ile	Thr	Cys	Ser	Gly	Asp	Ala	Leu	Pro	Lys	Gln	Tyr
				20					25					30
Ala	Tyr	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val
				35					40					45
Ile	Tyr	Lys	Asp	Ser	Glu	Arg	Pro	Ser	Gly	Ile	Pro	Glu	Arg	Phe

	50		55		60									
Ser	Gly	Ser	Ser	Ser	Gly	Thr	Thr	Val	Thr	Leu	Thr	Ile	Ser	Gly
	65								70					75
Val	Gln	Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gln	Ser	Ala	Asp
	80								85					90
Ser	Ser	Gly	Thr	Tyr	Glu	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr
	95								100					105
Val	Leu	Gly												

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the

surface of cancer cell membrane

(H) CELL LINE:

(I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION: 4
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION: /note = "Cys or Ser"

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION: 5
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION: /note = "Gly or Ser"

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION: 6
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION: /note = "Phe or Tyr"

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Ile Ser Ser Xaa Xaa Xaa Tyr Trp

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION: 3
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION: /note = "Tyr or Ser"

(x) PUBLICATION INFORMATION:

- 

Ile Gly Xaa Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr  
1 5 10

- (2) INFORMATION FOR SEQ ID NO:15:
- (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 4 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of



cancer cell membrane

- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION: 2
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION: /note = "Ala or Met"
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION: 4
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION: /note = "Tyr or Val"
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Gly Xaa Asp Xaa

1

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Ile Ser Ser Cys Gly Phe Tyr Trp Asn  
1 5

- (2) INFORMATION FOR SEQ ID NO:17:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 12 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody GAH
    - (H) CELL LINE:

- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
- (A) LIBRARY:
- (B) CLONE:
- (viii) POSITION IN GENOME:
- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:
- (ix) FEATURE:
- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Ile Gly Tyr Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr  
1 5 10

- (2) INFORMATION FOR SEQ ID NO:18:
- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:

- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Ser Thr Arg Leu Arg Gly Ala Asp Tyr

1

5

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:

- (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Lys	Ser	Ser	Gln	Ser	Val	Leu	Tyr	Asn	Ser	Asn	Asn	Lys	Lys	Tyr	Leu	Ala
1				5					10					15		

- (2) INFORMATION FOR SEQ ID NO:20:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 7 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:

- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Trp Ala Ser Thr Arg Glu Ser



1

5

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Gln Gln Tyr Tyr Ser Thr Pro Trp Thr  
1 5

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:

Ile Ser Ser Ser Ser Tyr Tyr Trp Gly Trp  
1 5 10

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:

A solid black circular stamp, likely a seal or a placeholder, located at the bottom center of the page.

Ile Gly Ser Ile Tyr Tyr Ser Gly Ser Thr Tyr Tyr Asn Pro  
1 5 10

(2) INFORMATION FOR SEQ ID NO:24:

- ```
(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 12 amino acids
    (B) TYPE: amino acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: protein
(iii) HYPOTHETICAL:
(iv) ANTI-SENSE:
(v) FRAGMENT TYPE:
(vi) ORIGINAL SOURCE:
    (A) ORGANISM:
    (B) STRAIN:
    (C) INDIVIDUAL ISOLATE:
    (D) DEVELOPMENTAL STAGE:
    (E) HAPLOTYPE:
    (F) TISSUE TYPE:
    (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    (H) CELL LINE:
    (I) ORGANELLE:
(vii) IMMEDIATE SOURCE:
    (A) LIBRARY:
    (B) CLONE:
(viii) POSITION IN GENOME:
    (A) CHROMOSOME/SEGMENT:
    (B) MAP POSITION:
```



- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Asp Ala Leu Pro Lys Gln Tyr Ala Tyr

1

5

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:



- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Lys Asp Ser Glu

1

- (2) INFORMATION FOR SEQ ID NO:27:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 11 amino acids
    - (B) TYPE: amino acid
    - (C) STRANDEDNESS: single
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: protein
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:
    - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
    - (H) CELL LINE:

Gln Ser Ala Asp Ser Ser Gly Thr Tyr Glu Val  
1 5 10

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:

- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

ATC AGC AGT WGT RGT TWC TAC TGG 24

(2) INFORMATION FOR SEQ ID NO:29:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 36 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATT GGG WRY ATC TAT TAY AGT GGG AGC ACC TAC TAC

36

- (2) INFORMATION FOR SEQ ID NO:30:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 12 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:

- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human monoclonal antibody, an antigen to which exists on the surface of cancer cell membrane
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:

(K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

GGK RYK GAC KWC 12

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:

- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

ATC AGC AGT TGT GGT TTC TAC TGG 24

- (2) INFORMATION FOR SEQ ID NO:32:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 36 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:
    - (B) STRAIN:
    - (C) INDIVIDUAL ISOLATE:
    - (D) DEVELOPMENTAL STAGE:
    - (E) HAPLOTYPE:
    - (F) TISSUE TYPE:



- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

ATT GGG TAC ATC TAT TAC AGT GGG AGC ACC TAC TAC

36

- (2) INFORMATION FOR SEQ ID NO:33:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 27 base pairs
    - (B) TYPE: nucleic acid

- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:

- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

TCT ACC CGA CTA CGG GGG GCT GAC TAC 27

(2) INFORMATION FOR SEQ ID NO:34:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 51 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody GAH
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:

- (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

|                                         |    |
|-----------------------------------------|----|
| AAG TCC AGC CAG AGT GTT TTA TAC AAC TCC | 30 |
| AAC AAT AAG AAA TAC TTA GCT             | 51 |

- (2) INFORMATION FOR SEQ ID NO:35:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 21 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:
  - (v) FRAGMENT TYPE:
  - (vi) ORIGINAL SOURCE:
    - (A) ORGANISM:

- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody GAH
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:

- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

CAG CAG TAT TAT AGT ACT CCG TGG ACG 27

(2) INFORMATION FOR SEQ ID NO:37:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 30 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:

- (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

ATC AGC AGT AGT AGT TAC TAC TGG GGC TGG 30

- (2) INFORMATION FOR SEQ ID NO:38:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 42 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double
    - (D) TOPOLOGY: linear
  - (ii) MOLECULE TYPE: cDNA
  - (iii) HYPOTHETICAL:
  - (iv) ANTI-SENSE:



- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

ATT GGG AGT ATC TAT TAT AGT GGG AGC ACC TAC TAC AAC CCG 42

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

(ix) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) IDENTIFICATION METHOD:
- (D) OTHER INFORMATION:

(x) PUBLICATION INFORMATION:

- (A) AUTHORS:
- (B) TITLE:
- (C) JOURNAL:
- (D) VOLUME:
- (E) ISSUE:
- (F) PAGES:
- (G) DATE:
- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

GGG AGC TAC GGG GGC TAC TAC TAC GGT ATG GAC GTC

36

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:

- (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:
  - (H) DOCUMENT NUMBER:
  - (I) FILING DATE:
  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

GAT GCA TTG CCA AAG CAA TAT GCT TAT 27

- (2) INFORMATION FOR SEQ ID NO:41:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 12 base pairs
    - (B) TYPE: nucleic acid
    - (C) STRANDEDNESS: double

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (iii) HYPOTHETICAL:
- (iv) ANTI-SENSE:
- (v) FRAGMENT TYPE:
- (vi) ORIGINAL SOURCE:
  - (A) ORGANISM:
  - (B) STRAIN:
  - (C) INDIVIDUAL ISOLATE:
  - (D) DEVELOPMENTAL STAGE:
  - (E) HAPLOTYPE:
  - (F) TISSUE TYPE:
  - (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
  - (H) CELL LINE:
  - (I) ORGANELLE:
- (vii) IMMEDIATE SOURCE:
  - (A) LIBRARY:
  - (B) CLONE:
- (viii) POSITION IN GENOME:
  - (A) CHROMOSOME/SEGMENT:
  - (B) MAP POSITION:
  - (C) UNITS:
- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
  - (C) IDENTIFICATION METHOD:
  - (D) OTHER INFORMATION:
- (x) PUBLICATION INFORMATION:
  - (A) AUTHORS:
  - (B) TITLE:
  - (C) JOURNAL:
  - (D) VOLUME:
  - (E) ISSUE:
  - (F) PAGES:
  - (G) DATE:

- (H) DOCUMENT NUMBER:
- (I) FILING DATE:
- (J) PUBLICATION DATE:
- (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

AAA GAC AGT GAG 12

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(iii) HYPOTHETICAL:

(iv) ANTI-SENSE:

(v) FRAGMENT TYPE:

(vi) ORIGINAL SOURCE:

- (A) ORGANISM:
- (B) STRAIN:
- (C) INDIVIDUAL ISOLATE:
- (D) DEVELOPMENTAL STAGE:
- (E) HAPLOTYPE:
- (F) TISSUE TYPE:
- (G) CELL TYPE: Hybridoma producing human antibody 1-3-1
- (H) CELL LINE:
- (I) ORGANELLE:

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY:
- (B) CLONE:

(viii) POSITION IN GENOME:

- (A) CHROMOSOME/SEGMENT:
- (B) MAP POSITION:
- (C) UNITS:

- (ix) FEATURE:
  - (A) NAME/KEY:
  - (B) LOCATION:
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  - (H) DOCUMENT NUMBER:
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  - (J) PUBLICATION DATE:
  - (K) RELEVANT RESIDUES:
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

CAA TCA GCA GAC AGC AGT GGT ACT TAT GAG GTA

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